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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/779,478	02/09/2001	Toru Yamaguchi	018842.1162	9443

24735 7590 05/05/2003

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WASHINGTON, DC 20004-2400

EXAMINER

LEO, LEONARD R

ART UNIT	PAPER NUMBER
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3743

DATE MAILED: 05/05/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/779,478

Applicant(s)

YAMAGUCHI ET AL 

Examiner

Leonard R. Leo

Art Unit

3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 7-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 3743

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 12, 2003 has been entered.

Claims 1-12 are pending, claims 7-12 remain withdrawn.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Gerstung et al (as permissibly gleaned from Figure 4).

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Tomoko (JP 7-280,484)(Figure 5).

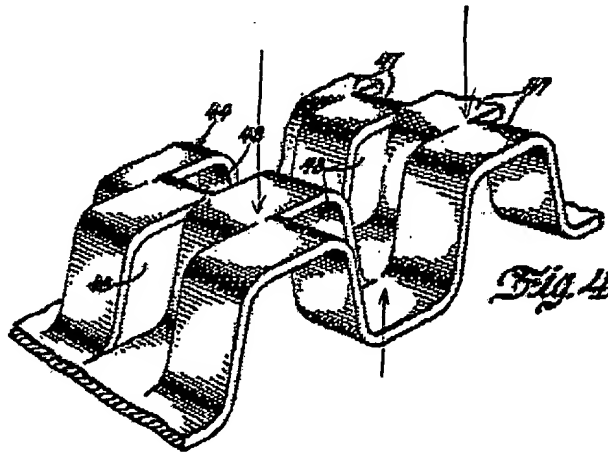
### *Response to Arguments*

In response to applicants' remarks filed February 12, 2003 and the interview conducted on April 29, 2003, the method of manufacturing the instant invention cannot be afforded any patentable weight in the instant apparatus claims, since the claims are capable of structural definition as a result of the different process. The Examiner acknowledges the "connecting portion" as recited in the claims is defined by the "overlapping flat portions" of adjacent fins.

Art Unit: 3743

However, applicants allege the "connecting portion" in Tomoko (Figure 5) is defined by both the "overlapping flat portions" plus "inclined portions." During the interview, the two step rolling process is believed to provide a "connecting portion" length that is constant throughout the thickness of the fin, whereas a one step pressing process would produce a varying "connecting portion" length along the thickness of the fin. In essence, the pressing process might crush the "inclined portion" of the fin or cut through the fin thickness at an oblique angle relative to the plane of the fin. However, as evidenced by Gerstung et al below, the device of Tomoko is believed to be similar to applicants' instant invention as claimed. Gerstung et al ~~is~~ shows the prior art structure of an inner fin.

As depicted in Figure 4 of Gerstung et al, the inner fin 44 shows only 4 adjacent waving strips 47. Connecting portions are not labeled but are defined by the uncut portions (see figure below).



The uncut portions are intersections between the "flat portions" of adjacent waving strips. The uncut portions between the rightmost waving strip and the adjacent waving strip show the "connecting portions" have the same length on the "outer" surface of the fin and the "inner"

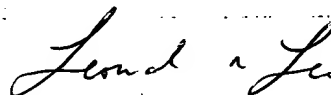
Art Unit: 3743

surface of the fin. Thus, the length of the "connecting portion" is constant throughout the fin thickness.

*Conclusion*

Any inquiry of a general nature, relating to the status of this application or clerical nature (i.e. missing or incomplete references, missing or incomplete Office actions or forms) should be directed to the Technology Center 3700 Customer Service whose telephone number is (703) 306-5648.

Any inquiry concerning this Office action should be directed to Leonard R. Leo whose telephone number is (703) 308-2611.



LEONARD R. LEO  
PRIMARY EXAMINER  
ART UNIT 3743

April 30, 2003